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**How Perceptions Impact Real Estate Decisions:
An Analysis of Residential Demand in Austin, Texas**

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An Analysis of Residential Demand in Austin, Texas**

by

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Thesis

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Abstract

How Perceptions Impact Real Estate Decisions: An Analysis of Residential Demand in Austin, Texas

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This thesis examines how social media trends create perceptions, which influence real estate decision-making within the Millennial generation, ultimately affecting their long-term investment and longevity in the city of Austin, Texas. To investigate the residential real estate market in Austin, specifically within the Millennial generation, I discuss decision factors with the residents and developers, known as stakeholders. By completing a mixed-methods analysis, I determine how Internet-based tendencies affect perceptions and economic realities of specific neighborhoods or the city, thereby affecting the residential real estate market as a whole. Approaching this research as a post-positivist, I hypothesize that the Millennial cohort is currently creating short-term demand for residential development with no long-term intentions of staying in the city. By discovering this future instability of sectors within the Millennial generation, especially in newcomers to the city, I question Austin's plans, which seem to lack amenities to provide for this cohort's residential longevity.

Table of Contents

List of Figures	vii
Chapter 1: Introduction	1
Austin Introduction	2
Chapter 2: Literature Review	5
Chapter 3: Methodology & Research Design	9
Survey Design	11
Quantitative Analysis	14
Qualitative Analysis	15
Chapter 4: Sustainability as Rationale & Relevance	16
Stability	17
Resiliency	18
Satisfaction	18
Authenticity	19
Chapter 5: Survey Results	21
Quantitative Results	21
Age of Respondents	21
Originating Location	22
Austin Residential Data	24
Income	24
Residential Tenure	27
Long-Term Investment Projections	30
Plans for Residing in Austin	31
Plans for Renting or Buying	33
Qualitative Results	35
Reasons of Mobility	35
Reasons to Move to Particular Austin Neighborhoods	35
Reasons to Move Away from Austin	37

Perceptions of Austin	39
Personal Perception of Austin.....	39
National Perception of Austin.....	44
Other Determining Factors of Mobility	46
The Internet and Social Media	46
Family Ties to Central Texas	47
Future Desirability of Austin	48
Single-Block Study	49
Mixed-Method Results.....	50
Chapter 6: Recommendations for Development.....	52
Interviews with Real Estate Professionals	52
Transit	56
Housing	57
Media	58
Chapter 7: Conclusion.....	60
Appendices.....	62
Appendix A: Survey Questions	62
Appendix B: Survey Sites & Statistics	66
Appendix C: Survey Results	67
Bibliography	74
Vita	82

List of Figures

Figure 1: Austin, Texas Map	2
Figure 2: Skyline from Congress St. (top 1969, bottom 2013) (Douglass, 2015) ...	4
Figure 3: Literature Review Categories	5
Figure 4: Research Design	10
Figure 5: Completed Paper Surveys	12
Figure 6: Line at Franklin's Barbeque (Photo by Kristen Fulmer)	13
Figure 7: Location of Administered Surveys (Photo by Kristen Fulmer)	13
Figure 8: Preliminary Mapping of Results (Photo by Kristen Fulmer)	14
Figure 9: Sustainability Definition	16
Figure 10: Originating Location of Survey Respondents (n=340)	23
Figure 11: Income vs. Location of Residency (n=340)	26
Figure 12: Residential Tenure vs. Location of Residency (n=340)	29
Figure 13: Plans for Residing in Austin (n=340)	32
Figure 14: Plans for Renting or Buying (n=340)	33
Figure 15: Top 3 Reasons to Move to Neighborhood, by category (n=340)	36
Figure 16: Reasons to Move to Another City from Austin, by category	38
Figure 17: Personal Perception of Austin (n=340)	41
Figure 18: Respondents' Guess of National Perception (n=340)	45
Figure 19: Neighborhood Character (Top 2007, Bottom 2015) (Google Earth) ..	54
Figure 20: Neighborhood Character (Top 2007, Bottom 2014) (Google Earth) ..	55
Figure 21: Paper Survey	65

Chapter 1: Introduction

Newcomers and life-long residents of Austin, Texas, have similar complaints: Their neighborhoods are losing character because of new, bland development; rising prices make it difficult to afford to live where they want; and too much vehicular traffic makes it difficult to navigate within the city. However, these concerns have not yet surfaced on the type of social media that impacts the perception of the city. In the eyes of transient Millennials, Austin is a city of diverse culture, individual personal identity, and unique social and environmental integrity. Currently, residents who are attracted to the city because of its booming job market and nightlife are driving the necessity for new developments within the real estate market, as Austin is continually ranked at the top of America's Fastest Growing Cities (Barr, 2014).

By focusing a study on Millennial residents, I will examine reasons that this particular cohort chooses to reside in specific locations within the city, compare expectations versus reality, and evaluate their long-term investment and interest in living in Austin. Additionally, I will discuss the subconscious effects of social media, as it may have enough power to impact real estate decisions of those residents. This research examines narratives of Millennials in Austin and then specifies a less conventional definition of *sustainability*, discussing how the city falls within that definition. Developed after the research was conducted, this definition calls to question concepts of long-term planning and the meaning of investment in a place.

AUSTIN INTRODUCTION

Austin, the capitol city of Texas, is a mecca for music, a variety of foods, outdoor activities, technology innovation, and alternative culture. It is also home to large festivals and events such as *Austin City Limits*, *South by Southwest (SXSW)*, *Formula-1* racing, and one of the largest universities in the United States, the University of Texas at Austin. Austin's location between other large cities such as Dallas, San Antonio, and Houston, is instrumental in attracting tourists, incoming college students, and business opportunities. This proximity to other cities (in addition to tax incentives, previously low property value, and a variety of other rationales) has propelled Austin to become a globally competitive tourist and employment hub, especially in the past ten years.



Figure 1: Austin, Texas Map

The state of Texas is ranked number two in resident inflows, leading to a net gain of 103,465 residents in 2014 (Urban, 2015). More specifically, Austin's population has increased from 497,154 in 1990 to 885,400 in 2013 (388,246 net increase), due to a greater number of job opportunities and new development (U.S. Census, 2015). This increased popularity and heightened national attention has altered the historic "small town feel," and led to complications with gentrification and a lack of affordability. The city motto, "Keep Austin Weird," highlighting the importance of individuality and small business, has transitioned to "Don't Dallas my Austin," aimed at retaining the city's unique culture, in contrast to Dallas'. To curtail the city's "weirdness" even more, the larger acclaim on the national (and international) level has led to a shift in style of architecture and building scale (seen in Figure 2) and traffic congestion and road construction.

The city of Austin is consistently in the media, such as: #1 "Hot U.S. City that offers both Jobs and Culture" in 2013, #7 on "Markets to Watch for overall real estate prospects" in 2013, #4 "Best place to raise a family" in 2013, and #1 "Spot for young adults" in 2011 (City of Austin, 2015). This constant, public hype of the city creates perceptions that residents may or may not feel to be accurate anymore. The following study explores these perceptions, realities, and the long-term intentions of Austinites, specifically Millennials, and relates the results to concerns for the city's sustainability.



Figure 2: Skyline from Congress St. (top 1969, bottom 2013) (Douglass, 2015)

Chapter 2: Literature Review

The literature review, separated into three main categories and outlined in Figure 3, clarifies bodies of literature that are important to this research. During the literature review process, I considered a variety of stakeholder perspectives, including residents and real estate professionals. After analyzing the information from different perspectives, I targeted a gap in information between the discussion of persuasion and predictability from social media and its influential power of perception versus reality within the built environment. The literature review also helped me to understand the Millennial generation's tendency to be mobile, transient, and understandably uncertain about the future. This finding is critical to the hypothesis that some within the Millennial population of Austin may not be invested, or interested in living in the city for the long term. The following categories of literature, also displayed in Figure 3, contain various sub-categories, which were especially relevant to my research.

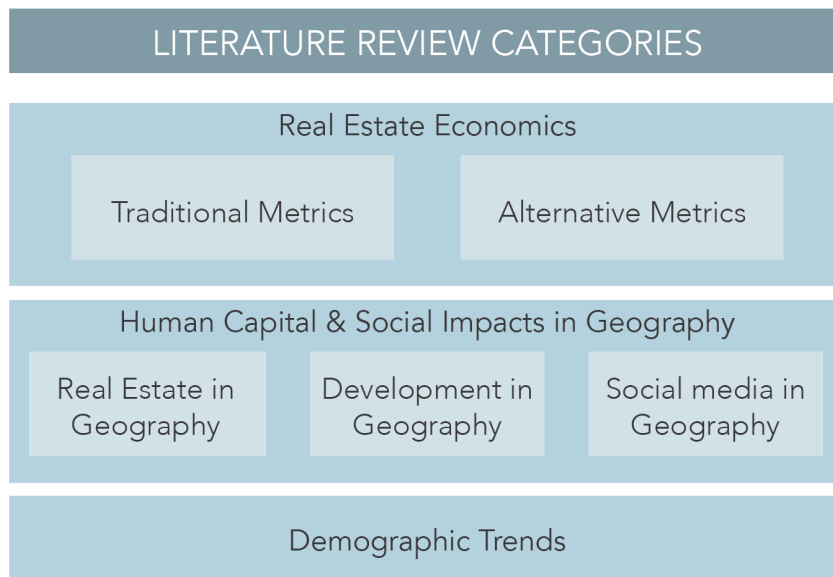


Figure 3: Literature Review Categories

The Real Estate Economics category, broken into sub categories of traditional metrics and alternative metrics, provide a background and summary of critical information from the developer's perspective. A majority of this information was written in the form of explanatory guides, outlining traditional pre-construction market analyses. It was evident that almost all of these analyses do not recommend measuring any alternative metrics, including emerging trends in demographic cohorts and the potential for persuasion through technology, such as social media. Authors, such as John Clapp of *Handbook for Real Estate Market Analysis*, explain that traditional metrics are important to most developers, such as segment demand, pricing analyses, and competition (Clapp, 1987). However, these conventional manuals omit the discussion of differences between actual and perceived demand and concepts that have arisen in the 21st century, such as social media. Alternative metrics, which were explored by authors such as Moses Abramovitz in *Economic Development and Cultural Change*, note the importance of changing demographic trends and how human desires may drive real estate decision-making from the developer's perspective. These alternative metrics, including how social media affects trends and human desires, are critical to developing in the 21st century.

The second category of the literature review concerns human capital and social impacts within geography and the built environment. David Harvey is a key author in this field because of his explanations of how humans, acting both socially and politically, influence physical geography. His explanations are critical to my argument that traditional market analyses lack a means to grapple with social components operating at various spatial scales. In *The Sociological and Geographical Imaginations*, he discusses globalization and the increased emphasis on place making; he also questions notions of identity. Identity and place making are also important to the discussion of the Millennial

generation because of their emergence within the globalizing world. Along with the conversation of globalization, Harvey writes about media and its effects on physical space. He questions whether the impact of media is objective or factual and discusses how it may sway different societal entities, hinting at notions of perception. Additionally, Harvey's chapter on tourism and the popularity of place relates to Austin's growing popularity, stating that the trendy nature of the city's hype may mask Austin's true characteristics in similar ways that tourism masks a location's true character; Austin's events such as *Austin City Limits*, the *Formula-1* race, and *SXSW* enhance the city's national and international reputation as a destination city for large events. The literature review on Harvey emphasizes the argument for the necessity to research social media's greater impacts on development.

Social media's effects on the built environment also fall within the second category of literature, seen in Figure 3. Authors such as Al-Deen Noor, in *Social Media: Usage and Impact*, discuss the impacts of media, specifically social media, on people's psyche. The literature review in this category contained actual research about Austin, citing examples of innovative technology gatherings, such as *SXSW*. Twitter, one of the broadest-reaching social media modes in the world, debuted at *SXSW* in 2007; this helped *SXSW* and the city of Austin showcase its new reputation on a global scale. Social media has a tendency to spread information through networks of friends, which are spread at an increasingly rapid pace. As the knowledge of Austin's popularity and unique culture spread through these modes of "trusted allies", as Al-Deen Noor states, the city's reputation gained an unprecedented reputation and perception. This is just one example of media's power, as this relatively new phenomenon has been heavily documented in this category of literature.

A third, and closely related category of literature provides a basis to understand demographic trends. These trends, which my study will describe as assumptions of the cohort, are important to grasp before conducting my study. Demographic trends within the Millennial generation, are currently between ages 22 and 35 years old, differ from any previous generation because they are the first to have grown up with technology as a mainstay in their young adult to adult lives. Studies about the Millennials are still quite new and there is more information to gather on the cohort, as the generation gets older. However, the literature review focuses on the general trends that economists, sociologists, and other researchers have projected about the generation. For example, Joe Cortright's *Young and Restless* (2014) expresses demographic trends about Millennials and their tendency to be comfortable moving across state lines and to delay purchasing homes, among other relevant statistics. This research will focus on the specific cohort and how it plays into the current real estate market in Austin, utilizing these articles as a basis to those findings. As more data emerges, information about demographic trends may have an effect on real estate economics, especially concerning the alternative metrics component of market analysis research.

Chapter 3: Methodology & Research Design

This research used a mixed-methods approach and a post positivist lens to consider quantitative and qualitative information to formulate a comprehensive, practically reasoned analysis. Utilizing a mixed-methods approach allows for quantitative and qualitative data to be collected and analyzed together, avoiding emphasis on one type of data over another. Due to rich narratives of residents in combination with the financial metrics of the economy, mixed methods was a necessary research strategy. Post-positivism recognizes the potential for bias and the involvement of the researcher within the content. By approaching the research with post-positivism, my proximity and personal perception of Austin, as a resident of the city, and as a member of the Millennial generation, is inherently acknowledged. Figure 4 below explains the research design and the steps that were taken to reach the unknown conclusions. Before reading the diagram, however, it is important to remember the assumptions about generational trends and development processes from the literature review.

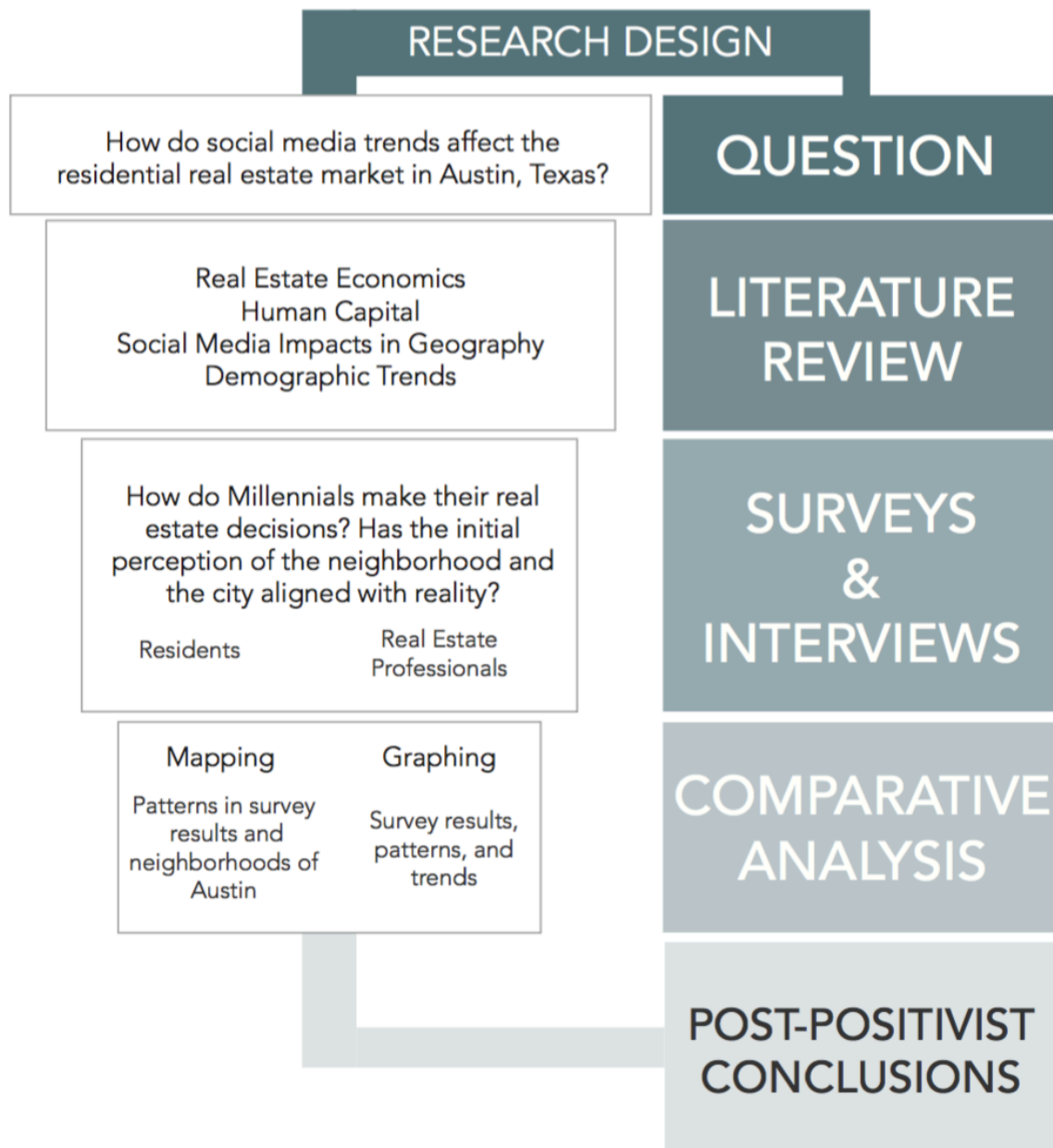


Figure 4: Research Design

The research design was structured to reach conclusions by conducting interviews, quantitative analysis, and by a survey method. These surveys displayed in Appendix A, focused on Austin residents within the Millennial generation and

complemented the informal, unstructured interviews with real estate professionals. Once this field research was complete, it was analyzed by comparing results quantitatively through statistics as well as qualitatively through categorization and associations within narratives.

SURVEY DESIGN

The primary mode of research was conducted through the online and on-paper survey, personally administered throughout the city of Austin. The survey, explicitly reported in Appendix A, was designed to reach as many as possible. Upon reaching those residents, I was able to filter out respondents that did not qualify (residents over the age of 35 or under the age of 22). Because many surveys were administered in person, I was able to avoid asking people who appeared to be too far outside of the age parameters. The only other requirement was that respondents must live within the city of Austin. It turned out that this prerequisite was not difficult to reach, as I received less than five online responses from people that did not live in Austin. While administering the survey in person, I confirmed that each respondent was an Austin resident to avoid non-resident responses. Aside from the requirements, I planned to avoid certain populations, such as University of Texas graduate students, who would technically meet survey requirements of age and residency, but would skew results about reasons to move to Austin and personal income levels.

The online survey was posted on many modes of social media and public blogs, including Facebook groups, community group boards, and Austin-specific blogs (a

complete list of survey distribution places is in Appendix B). That said it is difficult to gauge the total number of people that viewed the posts. The online survey elicited 182 responses, resulting in 150 usable surveys. The paper survey, which I personally administered to each respondent, elicited 190 usable responses, which were documented in a master spreadsheet with the online survey results (Appendix C). For the maximum amount of willing respondents for the paper survey, I asked people that were either waiting in lines, sitting at coffee shops, or relaxing in a social scene, where they did not appear to be rushed or otherwise occupied. I targeted these places by my previous understanding of the city's popular destinations and by the work schedule of most residents.

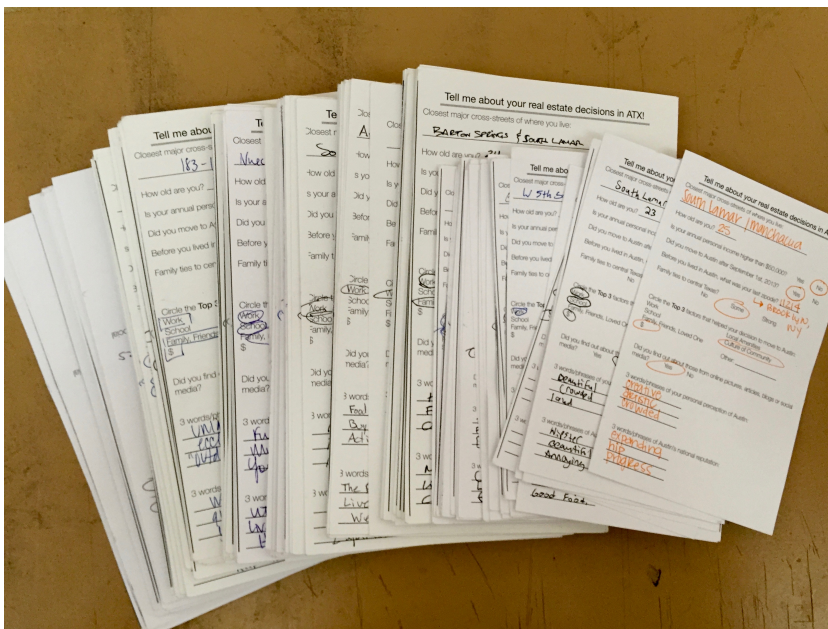


Figure 5: Completed Paper Surveys

I intentionally avoided areas that are known to be tourist attractions instead of local attractions. After explaining that the survey was for my master's degree and that it would only take two to five minutes to complete, I received ten to fifteen refusals and

spoke to an estimated fifty people that did not qualify, based on place of residence. Appendix B shows a complete list of locations where the survey was administered, including several residential developments, where I was unable to administer surveys because of privacy requirements.



Figure 6: Line at Franklin's Barbeque (Photo by Kristen Fulmer)

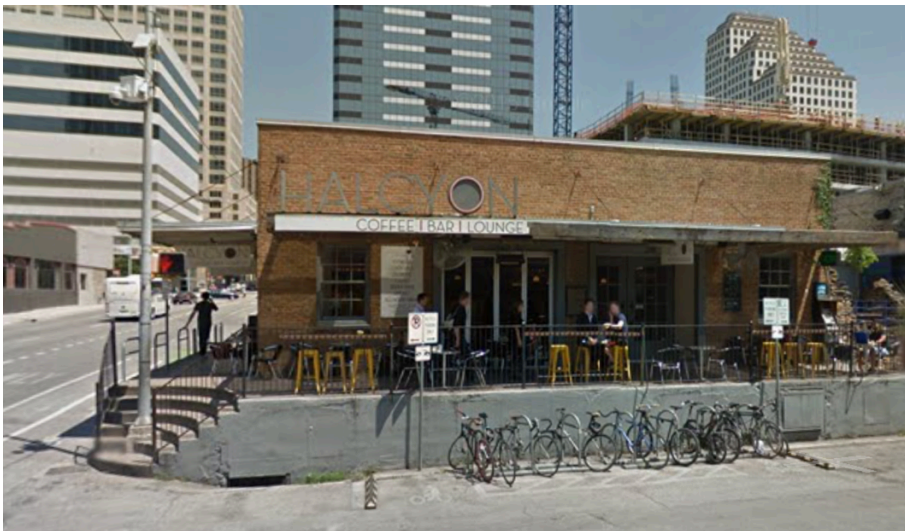


Figure 7: Location of Administered Surveys (Photo by Kristen Fulmer)

QUANTITATIVE ANALYSIS

Finding answers to the quantitative questions (numbers two, three, five and thirteen) outlined in Appendix A was essential in answering the larger research question of how many people are influenced by social media, how long people plan to stay, and whether residents are attached to Austin for the long-term. Other quantitative metrics from the survey include age and past places of residency. Similar to the qualitative portion, there are maps that display the results to these questions. These maps help to determine patterns and parallels between individual's qualitative narratives and quantitative responses.



Figure 8: Preliminary Mapping of Results (Photo by Kristen Fulmer)

QUALITATIVE ANALYSIS

Aspects of this study are difficult to measure quantitatively and must be addressed with qualitative narratives of residents and employees in the real estate industry who have experienced these difficult-to-pinpoint dynamics. Millennials' narratives include information about their future in Austin and because of their utilization of social media outlets, engagement with real estate professionals, and age and income levels, the study was designed to find those specifics within their larger narrative. By administering a survey, in Appendix A, this study determines that the quantitative aspects within the traditional criterion targeted in market analyses will not tell the full story of Austin Millennials.

By also conducting semi-structured interviews with developers and other real estate professionals, I was able to determine whether or not the emergence and prominence of social media, and the multiplicity of choices of location, have impacted their pre-construction market analyses. These analyses traditionally evaluate quantitative criteria, such as housing demand and the number of new job opportunities, to assist in determining whether or not to acquire property and build in a specific location (Clapp, 1987). After the interviews and surveys were complete, I began to analyze responses by mapping, charting, and categorizing this complex data.

Chapter 4: Sustainability as Rationale & Relevance

Most Austin residents would attest to the city’s “green,” “environmentally friendly,” or “sustainable” qualities. They may argue their claim due to the extensive recycling infrastructure, the growing demand for alternative transportation and alternative energy generation, or maybe that the beautiful environment incentivizes environmental education and protection advocates. Other components of simple sustainability, which are fueled by achieving deeper sustainability, include healthy living, such as hike and bike trails, an emphasis on fresh food, a vibrant social scene, and proactive environmentally-focused building strategies. For the purposes of this study, these versions of consciousness cyclically catalyze the four components of sustainability in Figure 9, which focus on other, less tangible, deeper components of the elusive concept.

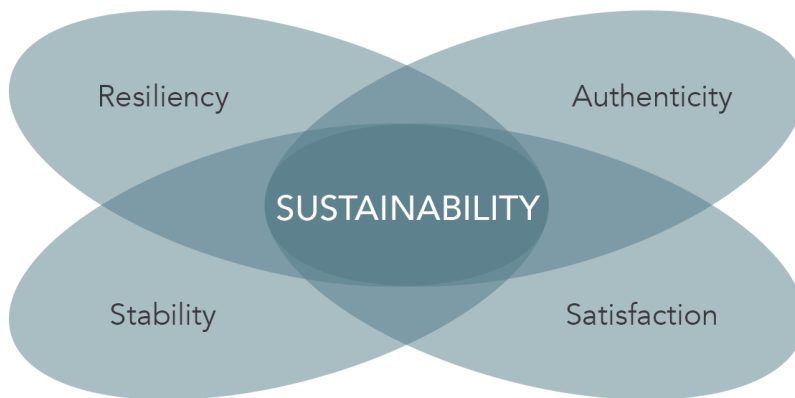


Figure 9: Sustainability Definition

STABILITY

Growing concerns of gentrification are laden with issues stemming from a long history of racial, economic, and educational segregation in Austin. To achieve social equity, related to a stable, balanced economy and political scene, the city must achieve proportional economic levels and racial, ethnic, and educational diversity. The first component of stability, as a necessity to a sustainable city, is connected to the social equity of a place and though not directly discussed in this research, it is important to note that stability cannot be achieved without social and political equity.

Long-term economic stability of the real estate market on a city-scale and on a neighborhood-scale within Austin is a central concern to this research. Stability is closely related to population, which has spiked 27% in the past ten years (City of Austin, 2015). The concern for population stability is also related to resident turnover and resident retention. More specifically, this study questions the long-term intentions of residents to live in or purchase real estate in Austin. The potential difference between future demand and a boom of current demand will only become greater as more development breaks ground and as the city gains residents. This dilemma is even further enhanced by the long permit approval process and lengthy construction process, which is catalyzed by current demand and may not be absorbed by future residents of Austin. This stability in the real estate market, specifically population stability, is critical to the overall wellbeing of the city's economy, as the transient populations shift and preferences change.

RESILIENCY

To ensure a resilient future, Austin must consider strategies to retain residents who would currently leave if the economy or job market shifted. When the economy plateaus or declines, it is imperative to retain the current and incoming residents with resilient planning. Resiliency is about “bouncing back” and prospering through all stages of the real estate cycle for long-term success. Austin’s current development is analyzed through traditional market analyses, and is based on the current demand, which is higher than it has ever been. When these high rates of demand decline, there must be a plan to remain as stable as possible. Austin is a city that has historically depended on spurts of vast development and economic prosperity. I would like to suggest that in addition to this boom-type of development, the city must plan for and allow for long-term resident rentership or ownership. To accomplish this shift away from the dependence on unprecedentedly high demand, the city could learn from other successful cities within the U.S. and internationally. The cities that fare well through the economic cycles provide amenities to residents of all ages, income levels, education levels, and employment specialties, instead of a segmented population. To ensure higher resiliency, Austin must plan to provide alternative transportation options, more low-cost housing options, and events that attract diversity, instead of segmented populations.

SATISFACTION

This study will argue that satisfaction, an unnecessary luxury in the eyes of many, is a critical criterion to achieve this deeper meaning of sustainability. The Millennials, a generation that has grown up with school violence, economic recessions, high parental

divorce rates, and a large increase of emphasis on technology, constantly seek a new level of comfort. This generation is known as one that is comfortable moving, one that bases decisions on popular trends, and one that is professionally driven, always seeking more satisfaction and achievement (Cortright, 2014). This generation likes to be comfortable and satisfied, both financially and in quality of life. Many newcomers to Austin had a choice of where to move within the U.S. because of financial flexibility and access to knowledge about the character of each city; to maintain a stable Millennial population, Austin must provide living situations that continue to guarantee satisfaction and comfort, such as the amenities mentioned to achieve resiliency.

AUTHENTICITY

Authenticity and satisfaction, similarly to stability and resiliency, complement each other to complete the four criteria in Figure 9 that are necessary to achieve a city's sustainability. For the sake of this research, the term *authenticity* refers to the necessity of a perceived genuine sense of place; the character of specific places has become more important in this ever-globalizing society. Landscapes of placelessness are abundant and people struggle to attempt to define and seek "home" and their status within it. Austin has an authentic regional character and is known for its unique, eclectic culture, crafting a sense of place, which some residents feel is disappearing because of the rapid influx of new residents and hastily designed and built buildings.

This research aimed to discover whether residents felt that the city was authentic by focusing survey questions on these concepts, asking if people's perceptions of Austin

had changed from before they moved to after they became a resident. The survey also asked respondents how Austin is portrayed on the national scale; this question provided notions of what a U.S. resident may think about Austin. For the most part, people answered quite similarly, so I can assume that this national perception of the city can be directly attributed to the national-scale media's portrayal. In potential connection to Austin's portrayal on a national scale, David Harvey stated, "... tourism sells geography as fantasy and wish-fulfillment but then has to make good somehow on the promise. The emphasis upon uniqueness and authenticity produces a plethora of detailed local knowledges..." (Harvey, 2006). *Authenticity* becomes a problem when the people with this common perception (maybe misperception), possibly from social media and effects from tourism, decide to move to Austin, not realizing other positive or negative components of the city or the tourist industry (at work during festivals such as SXSW, *Austin City Limits*, and Formula-1) that the media overlooked.

Chapter 5: Survey Results

After receiving a total of 340 complete survey responses, excluding an estimated 32 that did not qualify, I began to track results in an Excel document, categorizing responses about each question. Due to the number of variables in the study, it was important to maintain an orderly and consistent survey response filing system, shown in Appendix C. This method of study enabled simple statistical analysis and graphical comparisons between variables. As previously stated, the analysis can be broken into quantitative and qualitative results, which align with the initial survey questions shown in Appendix A. The results from this survey, broken into Quantitative, Qualitative, and Mixed-Methods Analysis within this chapter, tell the story of 340 Austinites' real estate decisions.

QUANTITATIVE RESULTS

The quantitative questions of the survey were designed to analyze concepts of time, age, and income of responding residents. These variables, described below, are critical to interpret relationships to the less tangible qualitative responses to the survey, which are described in the following section.

Age of Respondents

Millennials, aged 20-34 years old, are estimated to make up 26% of Austin's population (Raney, 2015). I decided to modify the definition of the millennial generation

as ages 22 and 35 years old, or current Austin residents who were born between 1980 and 1993: (This survey was administered between September 21st and October 15th of 2015 and exact birthdates were not part of the consideration). This reason for the modification was simply to avoid respondents that were still in college or college-aged, since they chose to live in Austin because of school. The average age of survey respondents ended up being 27.8 years old. This is only slightly below the median age of the Millennial generation, which is 28.5, meaning that there was a relatively even spread of responses throughout the generation.

Originating Location

As previously stated by authors such as Joe Cortright, the Millennial generation is known to be transient and willing to cross state lines for factors such as job, education, or simply a change of pace. This is obvious in Figure 10, which shows that out of 340 responses, respondents moved from 38 different states within the United States; it does not include nine responses from outside of the U.S. because the originating countries of those respondents were not specified. Original Austinites sometimes refer to these transient Millennials as ‘transplants,’ due to their propensity to move to new cities. This tendency to transplant oneself in a new place is quite apparent, as 92% of the survey respondents moved to Austin from another city, state, or country. Figure 10 displays states, in dark blue, where Austin Millennials previously lived before moving to Austin. The white orbs represent the individual cities that survey respondents moved from. It is important to note that New York City, Chicago, San Francisco, and other Texas cities were the cities of origin of the surveyed Austin residents. This information was found by

tracking ‘last zip code,’ a question on the administered survey shown in Appendix A and B.

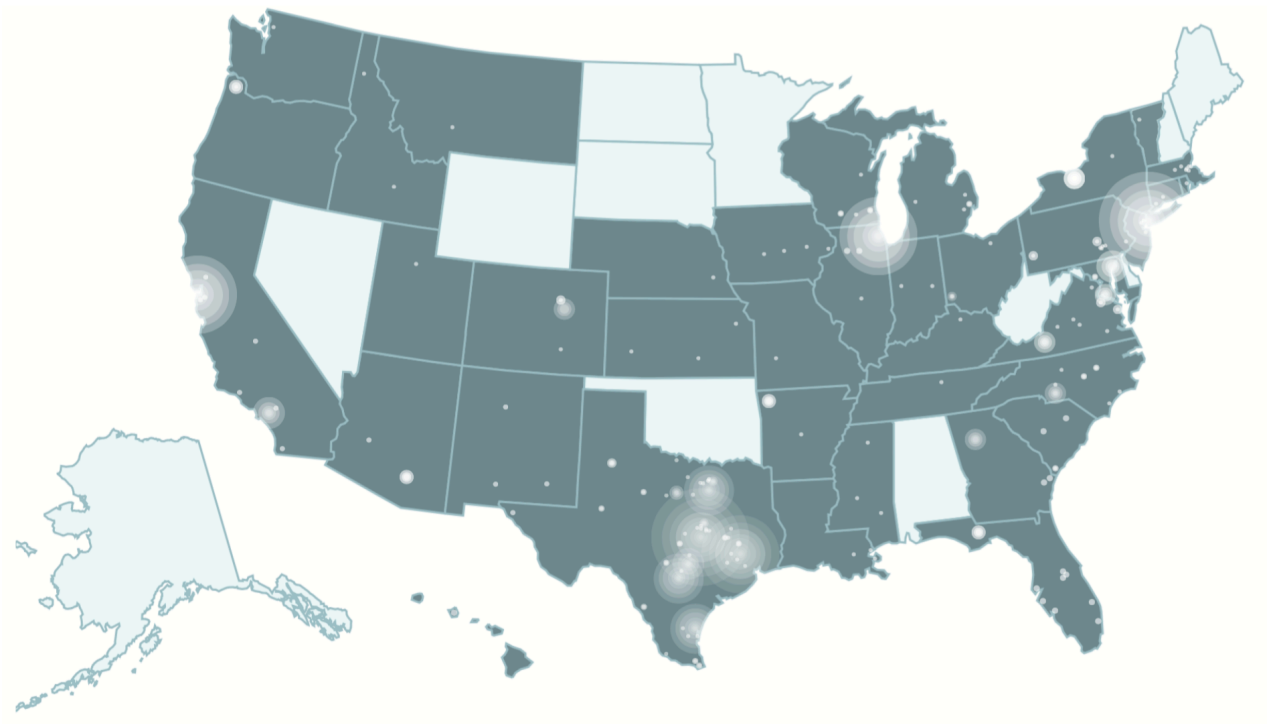


Figure 10: Originating Location of Survey Respondents (n=340)

Data reported by the Texas Association of Realtors, which recently found that 538,572 people moved to the state of Texas from out-of-state; 51,610 of those moved to Travis County, where Austin is located. That large in-migration equates to approximately 141 new out-of-state people per day, which contributes to the current necessity for new residential units (Theis, 2015).

Austin Residential Data

Income

Question number three on the survey asked residents about their income, another quantitative variable that is critical to understanding Millennials and the real estate decisions that they make. The question simply asked if the individual respondents' annual income, not household total income, was more than \$50,000 per year; the answer could either be 'yes' or 'no,' which became a metric that could be compared against other variables, whether quantitative or qualitative. A total of 201 residents, or 59%, responded that their personal annual income was higher than \$50,000. I chose the round, even number of \$50,000, due to the assumption that one third of annual income should be dedicated to living expenses for a decent standard of living, which, in Austin, totals approximately \$1300/month (Rent Jungle, 2015).

To analyze this information spatially, these responses were compared to the location of each respondent's home. This location, determined by asking each resident to name the closest large intersection to their home, was designed to avoid privacy concerns while simultaneously targeting groups of developments and neighborhoods. Figure 11 below displays each response of location and income, represented by a colored circle.

By comparing the levels of income with different locations within the city, the cost of living in certain parts of the city becomes evident. By reading the map, one could assume that the cost of living in downtown Austin is higher, due to the plethora of green circles, representing annual income over \$50,000. In fact, the average rent of a one-

bedroom apartment in downtown Austin is \$1,870 per month (McManus, 2015). By contrast, directly north of downtown is where the University of Texas is located, the majority of circles are orange, representing annual incomes under \$50,000. Indeed the average rent of a one-bedroom apartment in neighborhoods around the University of Texas (UT), including West Campus, North Campus, and Hyde Park is much lower than downtown at \$1,050 (ibid). This extreme differentiation between relatively close locations is a recent phenomenon; only five years ago, the downtown prices averaged \$1,585 and the northern UT campus neighborhoods averaged \$740 (Theis, 2014).

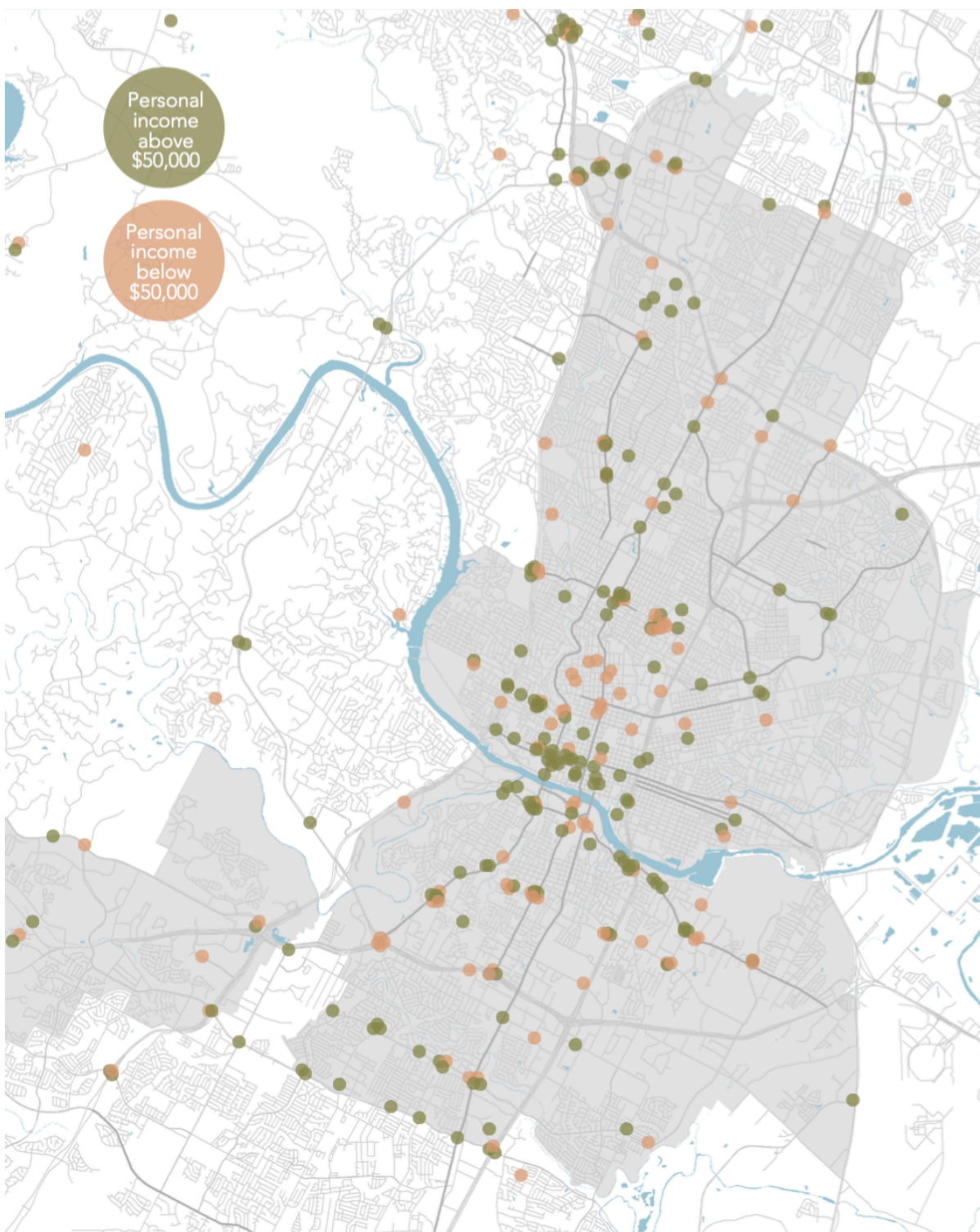


Figure 11: Income vs. Location of Residency (n=340)

It is interesting to note that surrounding downtown and the large university, there are no evident patterns related to income and residential location, based on this small sample size. Despite the lack of pattern, the cost of living in the entire city has grown so that 50% of Austin renters are cost-burdened, meaning that on average, they spend more than 1/3 of their monthly income on rent (Raney, 2015). Further studies by Texas Apartment Rentals show that almost half of those cost-burdened can be categorized as 'severely cost burdened,' meaning that they spend more than 1/2 of their income on rent. In 2010, Forbes voted Austin #10 of America's Most Affordable Cities. The same list voted Austin as the #19 Most Affordable City in 2015, where only 61% of the housing stock was available to a median family income (Levy, 2010).

This increase in living costs is not only represented in statistics, but also in the comment section of the survey. Simple comments such as, "Everything is too expensive," should be alarming when considering developing more luxurious housing. Though the affordability issue does not affect every Austinite, it becomes concerning when studying the dynamic shift in income level and associated class issues with long-term investment and deeper passion in Austin.

Residential Tenure

Question number four on the survey asked if residents have lived in Austin since before September 1st, 2013 or have moved to Austin since September 1st, 2013, attempting to determine their length of residential tenure in the city. In 2014, the population increased by 2.52% and in 2015, will increase by another 2.51%. This data

coordinates with the survey, where 150 respondents, or 44% said that they moved to Austin after September 1st, 2013 (Carlyle, 2015).

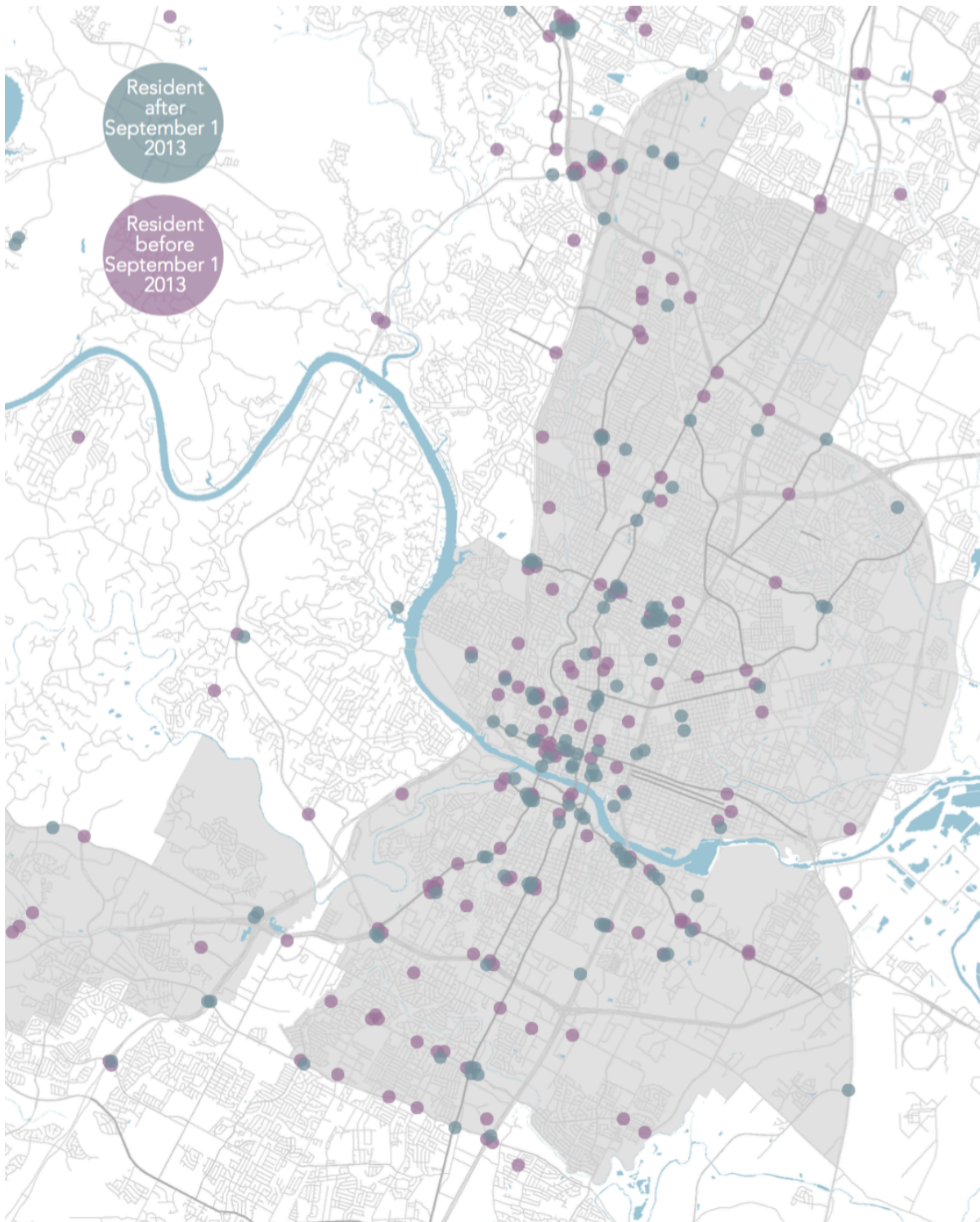


Figure 12: Residential Tenure vs. Location of Residency (n=340)

Figure 12 displays the same locations as Figure 11, but the colored circles in this map represents length of residential tenure; blue circles represent residents who have moved to Austin in the past two years and purple circles represent residents of longer tenure. According to this map, there are no discernable patterns to where Millennials with more or less tenure reside within the city. A study by the City and County of San Francisco found that most new developments in San Francisco, California, are actually occupied by residents with tenure longer than one year; new housing is 84% comprised of households that are not new to the city (Office of the Controller, 2015). Though this trend has been found in San Francisco, it is reasonable to assume that Austin's housing pattern may be similar because of the comparable size and economy of the cities. If that trend is, in fact, true in Austin as well as San Francisco, the new developments that are arising in empty lots around the city may actually house the residents represented by the purple circles, not by blue circles. Since new residential development tends to occur sporadically in empty lots and previously lower-density areas, it is difficult to pinpoint them in Figure 12. There may be many other reasons that there is no discernable pattern in the circles as well, including targeted marketing tactics of certain developments, a variation in rental costs in different neighborhoods, and the ability to move residency within the city after arrival, the randomness in survey results, or that old and new residents' locational preferences simply do not differ.

Long-Term Investment Projections

The final quantitative variables in the survey attempt to target the long-term plans of Millennials in Austin. For the sake of this study, 'long term' is only defined as ten

years, due to the higher level of uncertainty past ten years. This long-term investment is determined by how Millennial residents plan on spending the next two, five, and next ten years: by either staying, possibly moving, or definitely moving from Austin; and by either renting, possibly buying, or definitely buying in Austin.

Plans for Residing in Austin

Question number thirteen in Appendix A questions respondents' plans for residing in Austin in their future. The uncertainty factor for long-term plans is high, with 148 people possibly moving out of the city in two years, 191 people possibly moving after five years, and 167 possibly moving after ten years. According to the survey, and detailed in another section, that uncertainty is assuredly due to Millennial's dependence on job opportunities, living costs, and family and loved ones.

Though there is a level of fluctuation with some of the responses, there are also some telling responses of whether, given the choice, people want to move away or stay in Austin in the next two, five, and ten years. In two years, 193 respondents, or 56% definitely plan to stay in the city. In five years, the responses of those planning on staying after two years declined to 86 respondents, or 28%, and within ten years, it declined even lower to 18%. That said 10% of respondents plan on definitely moving from Austin in five years and 19% of people definitely plan on moving from Austin in ten years. These variables are represented in Figure 13.

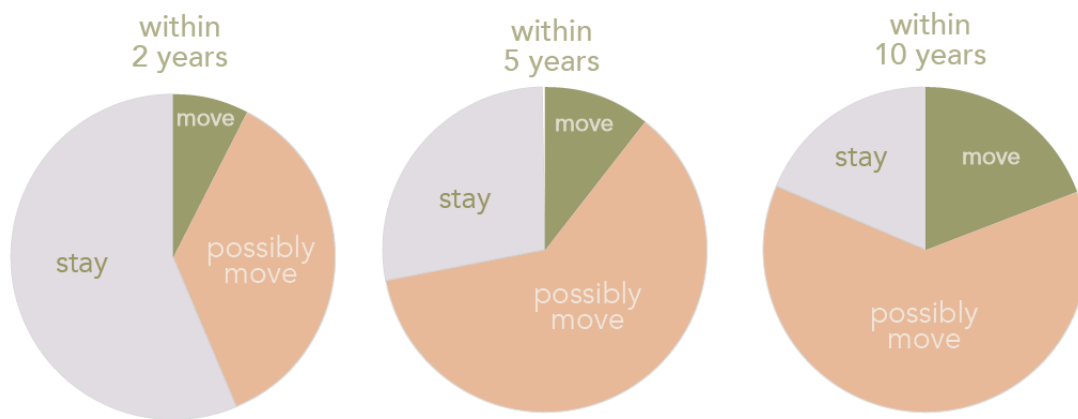


Figure 13: Plans for Residing in Austin (n=340)

The most shocking factor of the results from this question is that only 18% of respondents plan on definitely residing in Austin in ten years. This general trend to leave Austin after a short stay was mentioned in the survey comments such as, “Austin is a 2-3 year stop for me to build my resume. Then move again.” Though this small mobile subset of the entire Millennial population will not greatly contribute to the instability of the city, it is a sign of how this particular population views their future in Austin. This survey was administered during the peak of development in Austin; currently, there are many new projects at various stages of development. If, for instance, this survey was administered in 2016 or 2017 instead, when more of the city’s developments are complete and less are going underway, how many respondents would plan to stay in ten years? This question, larger than the scope of this study, must consider how many Millennials and other generations think about moving to or from Austin or other U.S. cities, such as New York, Chicago, and San Francisco.

Plans for Renting or Buying

In addition to asking about staying or leaving Austin, I also wanted to determine whether the people who stay are planning to buy or rent. This was question number fourteen in the survey of Appendix A and warranted feedback after the survey of respondents verbally commenting, “Wow, you’re really having me question my future here.” Again, the uncertainty factor for these variables is high, so survey respondents were able to respond that they will either rent, possibly buy, or definitely buy in the next two, five, and ten years. Figure 14 below shows the trends in these three future time periods. In two years, only 9% of respondents plan on buying real estate in Austin, while 60% plan on renting. In five years, definite rentership declined to 28% for residents that plan on either possibly or definitely staying in Austin. In ten years, 13% of respondents who plan on either possibly or definitely staying in Austin will rent, while definite home ownership only increased to 26%. That said, and evident below, there is a hesitation with respondents as to whether or not they plan to purchase real estate in Austin in the future.

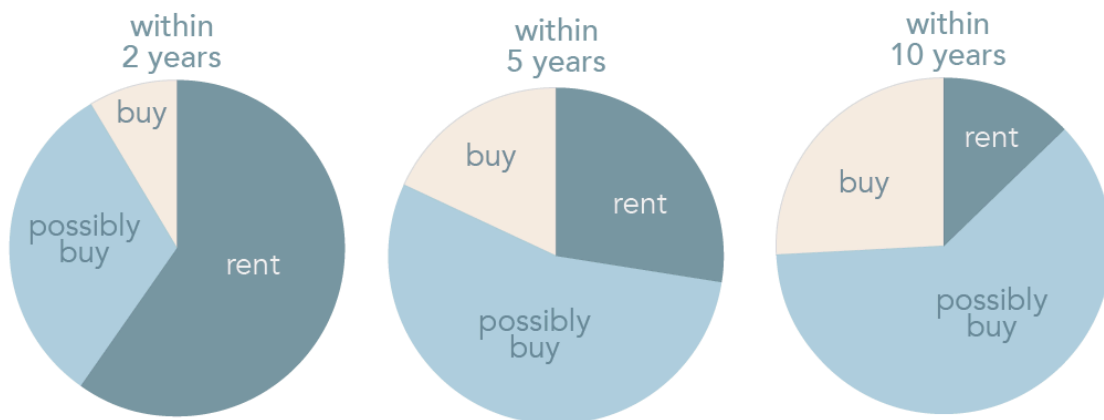


Figure 14: Plans for Renting or Buying (n=340)

Additional data from the literature review found that 13% of Millennials are interested in buying real estate in the United States, but can only afford 56% of the housing stock (Chininis, 2015). Specifically, the median home price in Austin has increased by more than \$65,000, or more than 30% from August of 2010 to August of 2015 (Ward, 2015). This huge increase in home prices has made Austin 19% over-valued and placed in the number one spot on a list of overvalued cities in the United States (Carlyle, 2015). This over-valuation, as defined by one researcher for Forbes, is found by assessing home price trends versus basic economic measurements, such as income growth, population growth, buyer demand, and inventory levels; if the home prices grow more quickly than these other metrics, the city will fall into a stage of overvaluation.

However, renting in the city is just as grim, where the overall cost of living has grown and the average rent in the Austin MSA was \$1,156/month in 2014 (HousingWorks Austin, 2015). In a study by HousingWorks Austin, 55% of Austinites were renters in the summer of 2015. Their study, using a similar study area to this research, divided the city into ten districts, where the highest rentership is in East Austin, North Campus, Hyde Park. Interestingly, the downtown area, which gained many responses in the survey, has 62% rentership because of an increasing share of the developments are condominiums. In fact, in the past fifteen years, 2,500 condominium units were completed in the downtown real estate market and an additional 1,200 units have been designed or begun construction. These condominiums are in high demand and sales have risen about 10% every year for the past five years (Novak, 2015).

QUALITATIVE RESULTS

While quantitative responses are simple to diagram, map, and graph, qualitative information must first be documented and categorized to form tangible metrics. Qualitative variables in this study, such as perceptions and levels of connections, are displayed in figures below and are categorized and measured by numbers of responses in certain categories.

Reasons of Mobility

Reasons to Move to Particular Austin Neighborhoods

Within the city of Austin, there are discernable neighborhoods, which house many residents, including the 340 Millennials that answered the survey. For the purpose of this study, it is not necessary to define the boundaries of each Austin neighborhood. Instead, it is important to understand that each neighborhood within the city is home to specific perceptions of character, politics, amenities, social standing, and income levels. Though this study does not compare these qualities to specific neighborhoods within the city, further investigation may be able to find patterns that help explain Millennials' decisions. These qualities of neighborhood, labeled work, school, loved ones, price, amenities, culture, and other were written on the survey where respondents were asked to circle the top three reasons that they chose their particular neighborhood. The *other* category, where respondents could write anything on a blank line, elicited additional decision

factors such as outdoors access, recommendations from friends, public transportation, proximity to hospitals, and simply a change of scenery.

Figure 15 shows the emphasis placed on certain factors, which respondents claimed that they used to choose a specific residential location within Austin. Among the specific factors available for selection, the most common response was work, where 25% of respondents chose their neighborhood partially due to their place of employment. Second and third factors were culture and amenities of the neighborhood, totaling 39% of the top three factors to determine residential location within the city. Interestingly, the proximity to loved ones, including significant others and family, made up 14% of respondents' determination of where to live, and the living cost was only answered 13% of the time as a top three factors.

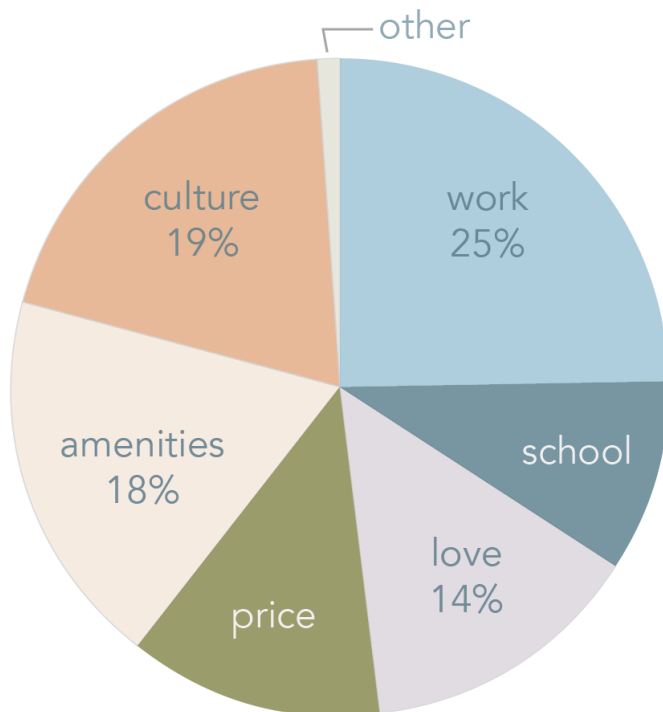


Figure 15: Top 3 Reasons to Move to Neighborhood, by category (n=340)

Reasons to Move Away from Austin

Question 15 provided the same categories of reasoning to move away from Austin as Question 7 used to ask the reasons to move to a specific neighborhood. Though some respondents simply stated that they would never choose to move from Austin because of family, most responses, displayed in Figure 16, created an interesting comparison to factors that made people choose to reside in a specific neighborhood. As a social generation, the most commonly answered reason to move to another city was due to loved ones, whether a significant other or family connections, with 28% of respondents considering this as a top three factor. The other two top three factors behind moving to other cities were employment (22%) and price was (21%). This may be due, according to some comments on the survey, from an increasing concern that the cost of living is rising in Austin. Some Millennials may begin to seek employment in cities with a lower cost of living, as written by this respondent, “The cost of living defined by the overall cost of transit and housing makes Austin unenjoyable to live in for my family (personal perspective). The cities [sic] assets and amenities are very attractive, however it’s just not a feasible long-term solution for the life style we wish to live.”

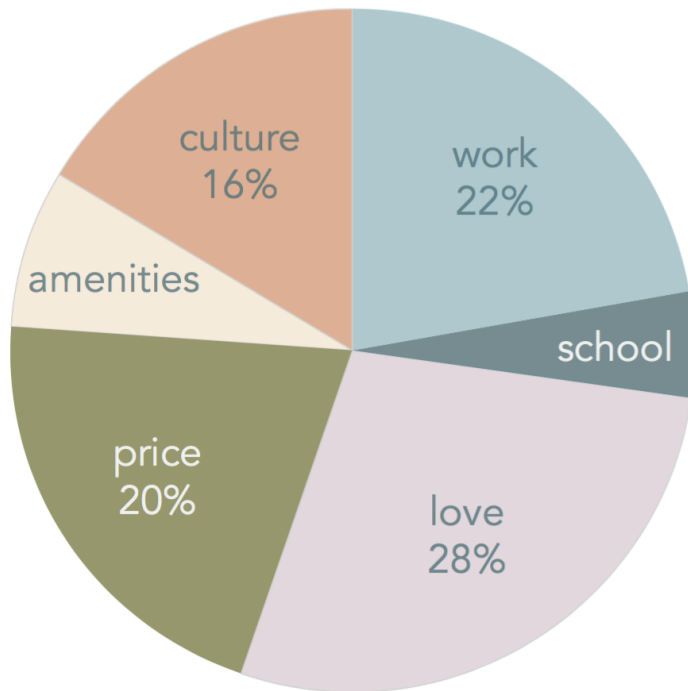


Figure 16: Reasons to Move to Another City from Austin, by category

An additional 24% of people consider the quality of culture and amenities to be a top three factor to move away from Austin. This statistic is quite telling, as Austin is generally commended in the media for its unique culture and variety of amenities. It is interesting to question whether the residents that answered culture or amenities as a top three reason to move to a new place were responding to Austin's qualities or simply to the appeal of other cities' culture or amenities. If, in fact, respondents are reacting to unappealing culture and amenities in Austin, the city must remedy that sentiment in order to retain residents and therefore resiliency.

Comments written in the 'other' blank space of the survey blamed traffic as another factor to move, saying, "I moved to Austin in 2005, and in the past 2-3 years I've thought about moving out of here. I never imagined moving from Austin, however now I am considering it. This is due to all the people that have moved here in the past 2-3 years,

and due to the growing traffic problems.” Another growing issue, mentioned in several comments expressed statements such as, “While I loved Austin when I moved here for school almost 8 years ago, that love has grown into a general disdain for the overcrowding of every natural area (e.g., Hamilton Pool, Greenbelt) and a general annoyance at the ‘bar culture’ that seems to be more pervasive here than elsewhere.” This sentiment for overcrowding, traffic, and cost of living may grow among residents, affecting all four necessary qualities for the definition of sustainability. There is an apparent decrease in satisfaction by residents, as they do not seem to be satisfied by the current traffic problem and rise in living cost. Additionally, the authentic culture is not able to prevail over the shift in city values. If this feeling of disdain for the crowds and traffic becomes more widespread, it could affect the amount of passion (and therefore long-term intentions) that many residents have for Austin.

Perceptions of Austin

Personal Perception of Austin

As initially expected, 92% of the total 340 survey respondents moved to Austin from another place. When constructing the survey, I realized that each respondent must have had specific reasons when weighing their options of whether or not to move to Austin. Due to the increase in ease of long-distance travel and long-distance communication, perceptions of the quality and character of a place becomes an increasingly effective factor on the choice of where to live. That said, I wanted to gauge the respondents’ perception of the city before they moved; it was equally important to ask

whether those initial perceptions are still currently accurate. The only way to study the perception of the city and to determine whether the city's experience is authentic to its perception is to ask what people think.

The feedback from this question was fascinating, as most respondents had very similar words or phrases to describe their personal perception of Austin. After conducting the survey, asking for three words or phrases to describe the personal perception of the city, it was evident that the responses fit into nine categories: wellbeing; social; attitude; politics; education; creativity; economy; community; and environment. These categories, when weighed by amount of times answered, provide insight into which qualities of the city affect people's perceptions.

Categories of Perception (~% of total answers)	Words and Phrases of Personal Perception (# of times per word, # no longer the perception)
Social (27%)	Fun (93, 1) Healthy, Active, Vibrant (49) Overrated, Overcrowded, Traffic (45) Cool, Hip (36) Nightlife (31) Events, Festivals (12)
Wellbeing (16%)	Young (60) Friendly, Happy (49, 2) Food (46) Safe, Quiet (5)
Economy (11%)	Growing (51, 2) Jobs (37) Tech (23) Affordable (21, 5)
Politics (10%)	Laid Back (41, 1) Liberal (34, 3) Progressive (28, 2) Government (4, 1)
Attitude (9%)	Eclectic, Unique, Weird (50, 9) Culture, Diverse (38, 3) Hippies, Hipster (22, 4)
Creativity (9%)	Music (78, 5) Artistic, Creative (20) Film (3)
Environment (9%)	Outdoors (64, 2) Weather (31)
Education (2%)	UT, College Town, University (17, 1) Educated, Informed (7) Schools (5)
Community (2%)	Community- General (9) Family (6)

Figure 17: Personal Perception of Austin (n=340)

Interestingly, concepts of social, creative, and health/wellbeing were the most commonly mentioned categories of respondents' personal perception of Austin. The nature of these responses, detailed in Figure 17, align with many articles from social media, touting Austin as of the "Best Places for Young Adults," as #11 in "Fittest Cities in the Country," and #2 for a "Livability Index list of the Best U.S. Cities for People 35 and Under." (City of Austin, 2015).

The absence of certain words and phrases is an even more interesting component to this comparison between media and personal perceptions of the city. A commonly answered word or phrase that is not usually shown in social media's portrayal of Austin is about the 'overcrowded,' 'overrated,' or 'high amount of traffic,' problems of the city. These notions were made up in the survey with comments such as, "Love Austin because of the small town feel but was still a city. That is starting to change and is the reason why I am considering moving in the future." This comment is a sign that other Millennials may share similar feelings, which could impact long-term intentions to stay in the city. Recently, publications about Austin have begun to discuss this emerging problem. A recent Thrillist article, titled "The 20 Worst Decisions You Can Make in Austin" sarcastically mocks new Austinites; #18 on the list alludes to the overcrowding and mocks people who try to casually drop by Alamo Drafthouse to see a movie saying, "Everyone else had this idea. Before you. When they bought all the tickets. Enjoy that front row!" The list also alludes to the growing traffic issue, stating that the #19 worst decision that you can make in Austin is "Attempting to drive either north or south on any road during rush hour."

Figure 17 also shows words and phrases that respondents said were accurate of their perception of the city before they moved to Austin, but no longer feel are accurate. Among these words are concepts of wellbeing, economy, politics, and attitude. Respondents felt that other residents of the city were not as friendly as they had initially thought, that the city was not as laid back or progressive, and was not as affordable or as culturally unique as they initially thought. These concepts were also mentioned in survey comments, saying, “Austin is grown and it has lost its charm,” “I think the culture now is amazing but starting to decline,” or “I don’t feel like it’s as unique as I was led to believe.” These sentiments were widespread, where 30 of the 150 online survey respondents felt that at least one of their original personal perceptions were no longer accurate.

These comments show a shift in feelings for the city’s culture and overall perception; this could lead to a misperception of the city by people who may want to move and is absolutely critical in increasing the city’s resiliency. When people feel that the city exudes a perception that is not consistent to how it performs, there is a factor of discomfort, which disrupts the satisfaction of residents and the city’s authenticity. Residents, on a larger scale than this study, should have confidence that their personal perception of the city is realized and portrayed accurately; if this feeling fades, the long-term investment of residents, who used to be confident that their perception was accurate, will dissolve. To clarify, this sentiment may be common among newcomers to other cities that are similar in size and also hyped in the media. This misperception of Austin may simply be a factor from becoming an internationally recognized city; however, to activate long-term residency, Austinties (and residents of other cities) must feel that the benefits outweigh their negative findings.

National Perception of Austin

When constructing the survey, I realized that in addition to their own perception, respondents would have presumptions of what others outside of Austin thought of the city. This variable, called the national perception and addressed in question number twelve of the survey in Appendix A, attempted to target the qualities of Austin that are represented on a national scale. Interestingly, this is where the research shows that, according to Austinites, the negative aspects of the city are not represented on a large scale. Respondents indicate that other U.S. residents think of Austin as: fun, unique, liberal, trendy, and full of music and hipsters. Though these qualities may be true, this survey question did not elicit as many phrases concerning traffic or the increasingly expensive living cost. Those types of answers were more commonly expressed in the personal perception of the city, where people who had actually experienced and researched the city were able to write of their personal opinion. Interestingly, while the personal perception of Austin was shifting away from its unique, weird, eccentricity, that quality was still commonly flagged in the national perception of Austin. This result may point to a lack of authenticity in the city and may adversely impact the city's reputation in the long run, as more people on a national scale realize some of the negative aspects expressed in the personal perceptions.

Categories of Perception (~% of total answers)	Words and Phrases of National Perception (# of times per word)
Attitude (21%)	Eclectic, Unique, Weird (101) Hippies, Hipster (70) Texan, Cowboys (20) Culture (10)
Social (18%)	Fun (53) Cool, Hip (43) Overrated, Overcrowded (33) Nightlife (27) Events, Festivals (17)
Creativity (17%)	Music (169) Artistic, Creative (13)
Economy (16%)	Growing, Trendy, Bubble (81) Tech, Innovation (50) Jobs (18) Expensive (13) Affordable (10)
Wellbeing (12%)	Food (54) Young (33) Healthy, Active (20) Friendly (15) Safe, Quiet (2)
Politics (9%)	Liberal (71) Progressive, Open Minded, Accepting (15) Government, Capitol (10)
Environment (3%)	Environment- General (40) Outdoors, Nature (21) Weather (19)
Education (2%)	UT, College Town, University (24) Educated, Informed (1)
Community (1%)	Community- General (7) White, Caucasian (4) Transplants (3)

Figure 18: Respondents' Guess of National Perception (n=340)

Other Determining Factors of Mobility

The Internet and Social Media

As previously discussed in other sections, the internet's effects on perceptions and portrayals may be on a more subconscious level than initially hypothesized at the beginning of this research. The survey asked, in questions numbered eight and sixteen of Appendix A, whether respondents base their decisions to move to individual neighborhoods through the information found on social media or the Internet. This question was not a required field on the online survey and only 77 out of 340 respondents chose to answer it. If this study continued, with the intent to determine Millennials' reliance and decision power of social media, this question would need to be revised to target the answers that the initial question intended to ask.

Of the 77 responses, 59% of respondents confirmed that they used the Internet, specifically social media such as Reddit, Facebook, Yelp, Craigslist, and local blogs to determine what neighborhood they would live in within the city of Austin. Importantly, these are the same types of modes of communication that portray the city on a larger scale with lists such as, "9 Hottest Neighborhoods to Buy in Austin Right Now," or "New List Says That Austin is the Best City for Millennials." (City of Austin, 2015). This potentially unconscious awareness of different social media outlet's portrayals of Austin could create more of an impact on the overall perception of the city than developers initially thought. Harvey wrote that. "... the impact of much of the visual media is primarily aesthetic and emotive rather than 'objective' and 'factual' the effect can be intensely political." (Harvey, 2006). If these visual portrayals of Austin are widespread,

even if not factual, perceptions from those visuals become political, skewing decision-making. If this topic had been a more central focus to the survey, there could have been more attention paid to specific outlets of social media and their particular influence on the market; there should be more research on this issue in the future.

Family Ties to Central Texas

As globalization and the ability to travel and experience other cultures become more simple and affordable, the feeling of place and the concept of home and an understanding of identity become more desired. Previous studies show that proximity to family is a central quality to feeling at home and therefore the formation of identity. Assuming that this notion of home and sense of place is related to how long people want to live or invest in a place, it is imperative to gauge each respondent's level of family ties to Austin. Since Austin is close to other major Texan cities, the question was designed to gauge the respondent's strength of family ties to Central Texas. Due to the amount of responses from people out-of-state, it is not surprising that 54% of respondents had no family ties to Central Texas and an additional 22% only have some family ties to the area. This variable is important in monitoring long-term intentions of Austinites and when compared to other variables in the Comparative Results section, it becomes a fascinating study of the narratives of transient Millennials in Austin.

Future Desirability of Austin

By questioning the future desirability of Austin this study can directly gauge respondents' level of happiness in the city. Question seventeen directly asked respondents whether they thought that Austin would provide more, less, or simply the same level of desirability or satisfaction to them in the future. Only 19% of respondents felt that the city would be more desirable to them in the future, while 35% stated that the city would be less desirable. The majority, with 45% of respondents, stated that the city would provide the same level of desirability to them in the future; previously mentioned comments alluded to the growing level of traffic and housing prices, which could influence their future level of desirability. This question was designed simply to quantify those results and not designed to go into greater detail, though many respondents mentioned Austin's future desirability in the comment box. One respondent wrote, "Eventually, after building a high-rise apartment on every corner, driving real-estate prices up, and not fixing the current infrastructure to keep up with the amount of people in the area, Austin will run out of steam. What once was a great local community will be nothing but a commercialized wasteland and its bubble will pop as its appeal will dwindle." This comment was not abnormal, as another resident wrote, "I say less attractive because of the traffic. I think Austin is a great town, but it's growing too fast. The infrastructure cannot keep up." Given these opinionated responses, a future study of this topic, with a more detailed version of this variable may help to provide insight to how Millennials see their future in Austin.

SINGLE-BLOCK STUDY

The original intention of this research was to learn about respondent's sentiments within one city block of Austin. In turn, I would have been able to interpret locational preferences and perceptions of specific blocks within neighborhoods of Austin. Unfortunately, all property management companies have strict privacy agreements and regulations. I was unable to enter the developments described in Appendix B and decided to conduct the citywide survey method described in this thesis paper. However, through a personal acquaintance and resident of Gables West Avenue, a development in the downtown neighborhood of Austin, I was able to survey fifteen Millennials that lived in the complex. During this open conversation, the residents informed me that they assumed that the majority of people in their development, and throughout downtown Austin were largely Millennials, like them, who had moved to Austin within the past two years and earning more than \$50,000 in annual income. These fifteen residents, with an average age of 28, were originally from cities other than Austin and only two were from the state of Texas. Even more interesting, only one of the fifteen intended to buy real estate in the city, and none of the fifteen planned on living in Austin in the next ten years. None of the residents thought that Austin would be more appealing to them in the future, even though two of them had some family ties to Central Texas. This information, though taken at a small-scale, begins to tell the story of a specific set of selected Millennials in Austin. To summarize, it is realized that if the majority of Austinties shared the same sentiment as the Gables West Avenue residents, the city may have an issue with future population resiliency within that age group. However, this small portion of narratives is not a telling example of the majority of Austinites, which means that my initial approach to the research may have skewed the results more than the method that I ended up conducting.

MIXED-METHOD RESULTS

All variables, outlined in the previous sections, individually become gauges to survey respondents' narratives, but when analyzed to determine relationships, they are telling statistics about a specific population of Millennials in Austin. To determine relationships between these qualitative and quantitative variables, this study employed the Chi-Square Test method to determine a "goodness of fit," or probability that two variables are statistically significant. When conducting this comparison, a good fit is determined when the p-value of the statistical test is less than 0.05, where the relationship is significant with 95% likelihood. Through this method, I determined several strong relationships between variables discussed in the previous two sections.

The qualitative variable, measuring each survey respondent's level of family ties to Central Texas, was important in determining whether Millennials plan to stay in Austin. To substantiate this question, I compared this qualitative variable to the quantitative variable about each respondent's intentions in two, five, and ten years. Not surprisingly, the decision to potentially move was related to the level of family ties with 97% likelihood and the decision to definitely move was related to the level of family ties with 96% likelihood. This statistical analysis can be interpreted to mean that the respondents who choose to stay do not necessarily have family ties, but when respondents begin to think about moving from Austin or definitely want to move from Austin, the amount of family ties to Central Texas is more likely to be involved in the consideration. It is possible that the residents with strong family ties to Central Texas (under-represented in my research sample), who may hesitate before moving, are the stable base of population that Austin needs to be resilient in the future.

The amount of income per resident is also closely related to the level of family ties to Central Texas. Interestingly, these two variables were also significantly related at 95% likelihood. Though the survey did not directly question this relation, I can assume that people with stronger family ties, who may choose to live in Austin because of loved ones, stay in the city for different reasons than people who are attracted to Austin on the basis of employment and income primarily. This assumption is grounded in studies that state, “Millennials will emphasize family experiences over material things,” documented by past surveys and analysis (Fromm, et. al., 2009). Similarly to the previous comparison between the level of family ties and the decision to move, this comparison may also be important in maintaining a resilient, loyal population of residents.

Two variables that proved to have no relation, according to the Chi-Square Test was the statistical comparison between annual income to Austin’s desirability. These variables were related with a .10 level of probability, indicating that there was no significant relationship. That comparison, the 35% of survey respondents who think that Austin will be less desirable in the future (question seventeen in the survey of Appendix A), do not generally feel that way because of their level of income. I also found that the level of family ties did not have a close relation to respondents’ future desirability of Austin. That may mean that though respondents with strong family ties are more likely to reconsider moving from Austin, the city may not necessarily be more desirable to them in the future. This statistic is just as important as variables that are related to each other because it shows that the city’s level of desirability may not be impacted by variables that I measured in my survey, and may be impacted by other quantitative or qualitative variables that are just as important to each respondent’s narrative.

Chapter 6: Recommendations for Development

INTERVIEWS WITH REAL ESTATE PROFESSIONALS

In addition to the survey, the research design discussed in Chapter 3 planned to collect information from developers. I did not have specific requirements, but simply planned to talk to a variety of real estate professionals. I conducted semi-structured interviews with three different types of developers and one leasing consultant from a large property management company. Of the developers, one was primarily responsible for the market analyses of large-scale single-family home developments for a nationally recognized development company, one was responsible for managing a large residential and commercial tower in downtown Austin, and one owned and leased rental property around the city. Not surprisingly, their responses about performing market analyses were quite similar; the main difference was the scale and scope of their research.

As stated in the Literature Review of Chapter 2, many developers only consider traditional metrics when conducting their pre-construction market analyses. Though I asked the three developers whether or not they consider alternative metrics, such as demographic trends and perceptions of the site through social media, it was evident that they were primarily interested in generating maximum income through traditional metrics. Interestingly, the developer that put the most emphasis on considering generational trends was the single-family home developer. I would assume that he must specifically focus on the Millennial generation since the home buying rate has declined in that cohort, resulting in a bigger demand for alternatives, such as downtown urban living.

Furthermore, I found that leasing consultants, who advertise apartment units in the downtown urban neighborhoods, might contribute to misperceptions of the city or specific neighborhoods, due to their portrayals in social media and branding strategies. The leasing consultant that I interviewed mentioned that property management companies create target markets for the potential residents of each development, based on demand, competition, and surrounding amenities. When designing advertisements to attract the specific target market (in many instances in Austin the target market is Millennials), they must research and focus on trends, aesthetics, and amenities that the particular cohort will be attracted to. For the most part, focusing on a specific target has been beneficial, as they have been able to harness the intended residents by displaying interests and available local amenities (such as proximity to transportation, restaurants, or hike and bike trails) in online advertisements. Though not a direct concern to the leasing consultant, these new developments drive the demand for surrounding amenities in order to retain the residents' interests. This leads to higher property values and can quickly transform neighborhoods, altering the character of a whole neighborhood and possibly resulting in complications of gentrification.

An example of this phenomenon in Austin is on East 6th Street, east of the infamous IH-35 corridor, which divides the city into an east side and west side. When originally zoning the city, the west side was favored due to soil and rock types and its beautiful, rolling hills and views of the Colorado River. The east side was the less valuable land, where minorities ended up living, due to private covenants and restrictions, which included less investment in infrastructure and social and educational programs. Currently, as developers find that the lower property values are on the east side of the city

and as Austin's popularity increases, creating more demand for residential development, the east side becomes the most cost-effective region in which to build. As seen in Figure 19 & 20, and as previously stated, this higher rate of residential development leads to the demand for amenities, such as restaurants, night entertainment and retail. In turn, these amenities are built and advertised to help the residential units get leased, leading to cyclical demand of surrounding services, inherently creating a "hot spot" of new development, which often changes the character of the neighborhood. Examples like Figure 19 & 20 can be seen throughout the city, as the popularity of urbanism rises with an increase in density.



Figure 19: Neighborhood Character (Top 2007, Bottom 2015) (Google Earth)



Figure 20: Neighborhood Character (Top 2007, Bottom 2014) (Google Earth)

Figure 20 is also a prime example, not only of the rapid development of East 6th Street, but also of the true character of the neighborhood, including vacant space for lease and small locally-owned businesses like pawn shops and antique stores. This contrasts the portrayal that is advertised on the development's website and advertisements, which may create a misperception of the neighborhood's character to perspective buyers and renters, especially if they are not previously familiar with the area. Real estate professionals may not need to be concerned with the power in the portrayal of differences between perceptions and realities or the larger issues that come with it. However, to improve Austin and help to ensure long-term interest in the city, I generated three strategies for the City of Austin.

TRANSIT

First, Austin must restrict developments that inhibit the four components of this study's definition of sustainability. To do so, the city should ensure stability and resiliency by providing accessible amenities that will enhance the desire to purchase real estate or sign long-term leases. After asking two developers what downtown Austin was missing, they both quickly responded, stating that implementation of a more extensive public transportation system would facilitate a reduction in vehicular traffic and would connect affordable neighborhoods with central downtown employment and entertainment. Though this is not a primary role of the developer, partnerships with the city for Transit-Oriented Developments could be a mutually beneficial strategy that would begin to appease the need for more affordable housing and the current traffic concerns.

The orientation of new mixed-use development on interconnected, multi-modal transit corridors is not a new concept and actually provides the basis for the urban grid of many older European cities. Ideally, as cities enter the 21st century, there would heavier emphasis on this alternative transportation, instead of the current emphasis on single-driver vehicles. Even in the United States, cities are beginning to make strides to implement streetcars, metros, and more sophisticated bus systems. Dallas, Texas, known to be a conservative city with extreme traffic problems and sprawling suburbs, has made significant progress on their DART (Dallas Area Rapid Transit) system, and contributed almost \$460 million to expand the network in 2014 (Dallas 2015). Consequently, the ridership has risen each year, as the city continues to construct \$3.5 million of Transit-Oriented Developments, with another \$2.8 million planned to go underway in the next

year (ibid). DART's TOD policy states, "These real property assets can also be used to leverage the viability of the transit system and to add to its value to the community. Continuing expansion and maturation of the transit system along with federal, regional and local initiatives that direct and concentrate TOD and urban infill around transit facilities enhance the value of these assets" (ibid).

Though the initial costs are high, the system should be viewed as an "asset," as DART writes, with the potential to increase quality of life through profitable development. This overall shift in emphasis from suburb development to interconnected development has pushed Dallas' ridership to reach almost 100 million riders per year. The implementation of a similar system could begin to reduce the vehicular impact of one of Austin's most congested roadways, IH-35, which hosts up to 200,000 vehicles per day (Texas DOT, 2011). Apparently, there is an overwhelming need for this type of expansive public transportation network in Austin, as expressed by fourteen survey respondents (listed in Appendix C), and by two developers I talked to, who specifically complained of the increase in vehicular traffic and need for better transit.

HOUSING

Second, Austin's City Council could implement a minimum of affordable housing units in certain developments, ensuring satisfaction and stability of diverse populations. If this type of policy were enforced citywide, the developers who elect to do so would be able to calculate the adjustment in their pre-construction budget, determining all

mandatory expenses ahead of time. It would ensure more long-term demand from a variety of socio-economic levels, satisfying residents and developers.

In November of 2013, Austin voters approved a \$65 million bond for affordable housing (Austin City Council, 2014). The City Council stated that the money would be implemented in the following five to six years, resulting in many affordable housing units throughout the city. By the end of 2015, Austin City Council will begin discussions on strategies to modify the city's Density Bonus program or to amend the Land Development Code (Whiston, 2015). Currently, when developers are offered the chance to pay a fee instead of constructing additional affordable apartment units, they opt to pay the fee. By revisiting the current policies and fee amount, City Council may elect stricter standards for higher density and ratio of market-rate to affordable housing units. Similar to the need for transportation, there is a definite demand for more affordable housing, as half of Austinites are cost-burdened, using more than 1/3 of their income for living expenses (Raney, 2015). Sixteen survey respondents specifically commented that the cost of living is becoming too high, resulting in a less satisfying living experience in Austin. Though this is a much more personal issue than traffic or public transportation, it is just as relevant to the overall wellbeing of the city of Austin.

MEDIA

Additionally, the city must be showcased, displaying the benefits of residing in Austin, aside from the tourist attractions and annual events. If the first two strategies were achieved, this third strategy would begin to emerge naturally, as media sources and individuals realize its potential for longevity. After implementation of the first two

recommendations, the media would show Austin's commendable innovative public transportation, inclusive affordable housing developments, and easy accessibility throughout the city, which gives people the perception of long-term living. Additionally, advertisements for housing would shift focus from a primary emphasis on the proximity to nightlife and trendy aesthetic to a more well-rounded, equal emphasis between nightlife, healthy amenities, transportation, affordable lifestyle, and more. A telling comment, mentioned previously in Chapter 5, mentions the "... general annoyance at the 'bar culture' that seems to be more pervasive here than elsewhere." Through a shift in social media's focus and increased emphasis in what the city can offer to its residents (in addition to tourists), the overall perception of the city could evolve and become a city that people are able to picture themselves living in and would therefore support more widespread long-term Millennial investment. Together, all three tactics would ensure that residents feel supported, secure, and comfortable to start new family ties in the area, building the base population of residents that provide resiliency in times of economic decline.

Chapter 7: Conclusion

This thesis paper expresses the narratives of 340 Millennials that live in Austin, Texas. These individual stories convey residents' real estate decisions and long-term investment potential in the city and begin to outline reasons that people within the specific generation move to and from cities and specific neighborhoods. Additionally, they examine these transient people's trajectories and analyze their perceptions versus realities of the city. I summarized relationships between metrics produced by the survey, and those correlations with the media, previous research, and real world examples of developments in Austin. This study explores these perceptions, realities, and long-term intentions, converting the results to implementation strategies for achieving sustainability.

After analyzing the survey results, previously documented trends in the Millennial generation, and conversations with real estate professionals in Austin, Texas, it is important to consider the questions that were not properly answered. At the beginning of the research, it was assumed that the primary focus of the study would be on the impacts of social media, and the "hype" and perceptions of Austin, but after conducting the research, I realized that social media is simply one component to a larger trend that Millennials are setting forth. The trend of Millennials to subconsciously rely on media, which the literature review began to explain, is much larger than this research, but may help in evaluating responses that this survey elicited. To conclude this finding, I believe that the perceptions created by social media must be analyzed further, as the portrayals that it creates may be critical to maintaining a sustainable city.

To conclude, Austin must implement policies that explicitly provide satisfaction, necessary to maintaining current stability, future resiliency, and an authentic perception, resulting in the deeper concept of sustainability, defined in this paper. These notions compliment and enhance Austin's current sustainability measures, such as "green building" standards, hike and bike trails, and farm-to-table restaurants, which help to attract people to the city. Authenticity, the necessary concept of maintaining truthful perceptions of the city on social media, is critical for residents and newcomers to feel that their concept of the city or their individual neighborhood holds true to their initial perception that attracted them, discussed in the National and Personal Perception section of Chapter 5. Satisfaction is achieved by creating comfort in both quality of life (outdoor activities, sense of community, etc...) and in maintaining an affordable lifestyle. It would be ensured by implementation of public transportation and affordable housing, discussed in Chapter 6. Maintaining stability, closely related to cultivating a resilient base population, includes increasing the number of Millennial residents that are interested in creating a home, starting a family, and picturing their long-term future in Austin. Together, application of all four components in this definition of sustainability foster a 21st century city that people, specifically Millennials, can picture themselves living in and being passionate about in times of boom and bust.

Appendices

The following appendices address the field research component to this study.

APPENDIX A: SURVEY QUESTIONS

1. What are the approximate major cross-streets of where you currently live?

2. How old are you?

3. Is your annual personal income higher than \$50,000?

- a) Yes
- b) No

4. Did you move to Austin after September 1st, 2013?

- a) Yes
- b) No

5. Before you lived in Austin, what was your last zip code?

6. Do you have family ties to Central Texas?

- a) None
- b) Some
- c) Strong

7. What are the top three factors that helped your decision to move to the neighborhood in Austin in which you live? You may choose less than three.

Work

School

Family, Friends, Loved Ones

Price

Local Amenities and proximity to a particular destination – downtown, bike trail, park, grocery store, etc...

Culture of the community – neighborhood community support and groups, art, nightlife, etc...

Other: _____

8. If you answered “Local Amenities” or “Culture of Community” in Question 7, did you find out about those from online pictures, articles, blogs or social media?

- a) Yes
- b) No

If yes, please list which types (or titles) you remember being most effective:

9. How would you describe your personal perception of Austin before you moved? Provide three phrases that attracted you to the city.

10. Do you think those phrases are still accurate since you lived here?

- a) Yes
- b) No

11. If you feel that they're inaccurate, please list the phrases that are no longer accurate in the box below.

12. Please provide three phrases to describe Austin’s general national reputation. If these are the same as Question 9, please write again.

13. Please answer these questions about your hopes for your future in Austin:

	Definitely move from Austin	Possibly move from Austin	Definitely stay in Austin
Within 2 years			
Within 5 years			
Within 10 years			

14. If you plan on staying in Austin, please answer this question about your future plans in Austin. Otherwise skip.

	Definitely continue to rent	Possibly buy home or condo	Definitely buy home or condo
Within 2 years			
Within 5 years			
Within 10 years			

15. What are the top three factors that could change your plans to move to a different place? You may choose less than three.

Work

School

Family, Friends, Loved Ones

Price

Local Amenities and proximity to a particular destination – downtown, bike trail, park, grocery store, etc...

Culture of the community – neighborhood community support and groups, art, nightlife, etc...

Other:_____

16. If you answered “Local Amenities” or “Culture of Community” in Question 15, would online pictures, articles, blogs or social media help you make those judgments?

a) Yes

b) No

17. Do you think that Austin will be a more attractive city to you in the future?

a) More

b) Same

c) Less

18. Anything else you'd like to say?

Figure 21: Paper Survey

Tell me about your real estate decisions in ATX!

Closest major cross-streets of where you live: _____

How old are you? _____

Is your annual personal income higher than \$50,000? Yes No

Did you move to Austin after September 1st, 2013? Yes No

Before you lived in Austin, what was your last zipode? _____

Family ties to central Texas? No Some Strong

Circle the **Top 3** factors that helped your decision to move to Austin:

Work Local Amenities

School Culture of Community

Family, Friends, Loved One Other: _____

\$

Did you find out about those from online pictures, articles, blogs or social media? Yes No

3 words/phrases of your personal perception of Austin:

3 words/phrases of Austin's national reputation:

Within **2 years**, will you:
Definitely move from Austin Possible move Definitely stay

What about within **5 years**?
Definitely move from Austin Possible move Definitely stay

How about **10**?
Definitely move from Austin Possible move Definitely stay

If you plan on staying in Austin and don't already own,
Within **2 years**, will you:
Definitely rent Possibly buy home/condo Definitely buy

What about within **5 years**?
Definitely rent Possibly buy home/condo Definitely buy

How about **10**?
Definitely rent Possibly buy home/condo Definitely buy

Circle the **Top 3** factors that would convince you to move to a different city:

Work Local Amenities

School Culture of Community

Family, Friends, Loved One

\$

Do you think that Austin will be a more attractive city to you in the future?
Same More Attractive Less Attractive

Anything else you'd like to say?

Want a chance to win 1 of 5 \$100 Amazon gift cards?
Email or Phone Number: _____

Kristen Turner
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Master in Sustainable Design Thesis Project
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APPENDIX B: SURVEY SITES & STATISTICS

Dates online surveys were open: September 18, 2015 – October 15, 2015

Total online responses: 182, Total paper responses: 190, Total ineligible responses: 32

Online survey post locations:

Craigslist: Community ,General

Reddit: Austin, Austin Classifieds

Facebook: Virginia Tech Alumni, Duke Alumni, Eagles Fans, Austin Tiny House Meetup, New To Austin

LinkedIn, Real Estate Networking in Austin

Twitter

Local Austin blogs

Paper survey administered locations:

Caffe Medici 1100 S Lamar Blvd #2125	Lamar Union 1100 S Lamar Blvd
Cenote Coffee 1010 E Cesar Chavez St	Rainey Street 79 Rainey St, Austin
The Domain 11410 Century Oaks Terrace	Starbucks 501 W 15th St
Franklin's Barbeque 900 E 11th St, Austin	West 6 th Street 600 W 6th St
The Gables Apartments 115 Sandra Muraida Way	Whole Foods Market W. 6 th Street
Halcyon 218 W 4th St	Wright Bros. Brew & Brew 500 San Marcos St #105
Jo's Coffee (& surrounding area) 1300 S Congress Ave	

Locations with attempted administered surveys:

The Doman residences, Lamar Union residences, 7East Apartments, The Corazon, The Boulevard at Town Lake Apartments, BartonPlace Condominium, Zilkr on the Park Apartments, AMLI on 2nd, Berkshire SoCo, The Triangle, Midtown Commons, Verano Luxury Amartments, The East Village, The AMLI Eastside, Eleven Austin Apartments, Cityview at SoCo, SkyHouse Austin

APPENDIX C: SURVEY RESULTS

(following pages)

68

[illegible]

COMMENTS:
NIMBYs are going to make Austin unaffordable for people who don't already own homes unless they are rich cash buyers.
Gentrification is kicking my butt
What was once Austin will no longer be. Changes to date have been profound and not in the cities best interest. I hope the next 6 years is different than the last.
I have a lot of friends who are musicians, and it really sucks to see them getting priced out of the housing market here, in terms of both renting and owning. The gigs pay the same as they did 20 years ago while home values and rents are through the roof, and club owners are getting squeezed with higher rents as well. While my wife and I are doing well here career-wise, I would consider moving to a place where you don't have to have a high income to live in/near town.
i still love the city a lot but it's getting congested and I feel way too expensive
My family moved to Austin when I was 9, so I don't know how valid my answers to question 9 are.
Too much traffic
This questionnaire was built for transplants and it's hard to answer as a native
Public transportation options are sorely lacking and traffic is getting worse all the time.
Overall I enjoy living in Austin. Real Estate prices and traffic/lack of better transportation are frustrating. Not the reason I plan on leaving in the next 5 - 10 years, my wife's job will end up taking us elsewhere.
It's changing rapidly and not adapting to growth.
Austin is not a bad city, but its hypes up to be this amazing cultural phenomenon in central Texas, and in reality there's really nothing special about it. Sure the greenbelt is cool and craft beer is huge here. But realistically, all that stuff exists in many other places. Austinites are just naive in thinking they're town in special.
I would never leave Austin if I was single without kids but now that I do have a family I would consider going somewhere less populated and more family orientated
I moved in Austin in 2005, and in the past 2-3 years I've thought about moving out of here. I never imagined moving from Austin, however now I am considering it. This is due to all the species that have moved here in the past 2-3 years, and due to the logarithmic growing traffic problems.
I would love to be able to afford to BUILD my own <1,000 sq. ft. house within the city limits of Austin in the next 2-5 years.
Eventually, after building a high-rise apartment on every corner, driving real-estate prices up, and not fixing the current infrastructure to keep up with the amount of people in the area Austin will run out of steam. What once was a great local community will be nothing but a commercialized wasteland and it's bubble will pop as its appeal will dwindle.
Moved to Austin in 1997, have owned and sold real estate in Austin, currently renting
Traffic in Austin is a huge issue - Could be a big factor for people coming/staying
I love this city
Austin is over hyped
I say less attractive because of the traffic. I think Austin is a great town, but it's growing too fast. The infrastructure cannot keep up.
I love Austin!
Austin is a 2-3 year stop for me to build my resume. Then move again.
Austin is grown and it has lost its charm
The cost of living defined by the overall cost of transit and housing makes Austin unenjoyably to live in for my family (personal perspective). The cities assets and amenities are very attractive, however its just not a feasible long term solution for the life style we wish to live.
Love Austin because of the small town feel but was still a City. That is starting to change and is the reason why I am considering moving in the future. That being said, this is probably the reason more people are moving to Austin.
Austin is at an affordability crossroads. The next 20 years will be predicated on their actions during the next 20 months. I come from Reddit.
I accept the growth but wish Austin would work with City Planners to stop the over growth of certain corridors, such as Lamar. Need to have more urban spread similar to Houston.

Austin has been an exciting and wonderful place to live with many opportunities thrown my way.
Austin is a great city, I but I feel it is expanding too widely as a tourist town.
Austin is really getting crowded and I feel sorry for someone trying to buy a house now a days.
Being from Austin is weird and that has not been kept.
Everything here is too expensive
Many of the places I enjoy are being closed down and my cost of living keeps going up while my income stays the same, so I'm probably going to have to move within 10 years.
While I loved Austin when I moved here for school almost 8 years ago, that love has grown into a general disdain for the overcrowding of every natural area (e.g., Hamilton Pool, greenbelt) and a general annoyance at the "bar culture" that seems to be more pervasive here than elsewhere.
There needs to be more discussion about displacing lower income residents from the Hip areas of town in ways that don't kill growth.
It's great, except for the reliance on personal transportation and lack of investment in transportation infrastructure
Long-term civic planning is my biggest concern for the city and would be the most likely reason for me leaving if I did.
Traffic sucks
I'm glad I moved to Austin when I did, it's a great city for younger folks but I don't really see myself settling down and raising a family here.
Job competition is tough and salary is not comparable to other cities. Prices like rent are higher than where I lived previously.
I love Austin. After visiting just one time, I decided to move here. It took me a few years to actually do it, needed to finish my grad program, but once I did, even knowing no one in this town, Austin was enough on it's own.
Lived here for 10 years and seen Austin change a lot, but its still better than Florida or Baltimore.
Austin is unique and one of a kind. That's what makes it so different.
The traffic and general congestion and cost of buying a home are bad
Traffic sucks
closing on first home in Austin next month
Previous question is difficult because I've only been here for 6 months and right now everything is fun and new. This will likely wear.
Austin is exploding. It will be the next Silicon Valley
Austin is growing like crazy. This may change my perception of it in the future.
Austin is the place to be if you love food and to drink!
Stop killing the things we love for condos
I love this city. It is home but its time to go.
It's fun to live in Austin but it's a bit pricey
I love Austin
I love Austin- my favorite city I've lived in!
I love Austin
People need to stop moving here!
Increasing population is a negative
Costs of living will push people out.
Rent is too high!
Don't move here
Needs more direct flights!
Just moved here 3 days ago!

Don't Dallas our Austin
Too expensive to buy in Austin
Austin has been good to me
I work in Houston most of the time
Too liberal!
Love the city but my family lives elsewhere and it's too hot!
Low fed rates have suppressed total cost of home ownership, raising home prices. This can change.
Get some rail lines!
Austin is great... don't move here!
I moved to Austin from NYC for a similar cultural experience but a change of pace.
In the few years I've been here I can already see an unwanted change
"Keep Austin corporate". From Austin and watched it become less charming
Affordable housing is definitely something that needs to be funded for Austin students and struggling residents
Less attractive if they don't fix the traffic issues
Austin is the best.
I love Austin, but miss my family
I think the culture now is amazing but starting to decline
Too many Californians
Too many people from out of state
Austin is great, but developing too fast.

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Vita

Kristen Alyse Fulmer is originally from North Carolina, where she developed an early passion for the built environment and architecture. Kristen received her bachelor's degree in Public and Urban Affairs & Environmental Concentration with a minor in Residential Property Management from Virginia Tech, where she fell in love with urban spaces. She spent a summer in Washington D.C., working with the National Capital Planning Commission, where she experienced urban design critique, research, and the approval process on a Federal level. After graduating from Virginia Tech, she became employed with a real estate development company called Beacon Communities. Though the company is based in Boston, Kristen quickly became a Multi-Site Manager in Harrisburg, Pennsylvania, and was able to learn about budgeting and building values. After one year in Harrisburg, she decided to make the move to Austin, Texas, to receive her Master's Degree.

In addition to working towards her master's degree, Kristen continued employment with Beacon Communities. She also enjoyed Lead Teaching Assistant positions during her three semesters at UT and acquired a First-Year Interdisciplinary Teaching Certificate, an Inclusive Classrooms Leadership Certificate, and the Signature Course Teaching Assistant Award.

Kristen has been extremely appreciative of the opportunities that she has received and hopes to continue pursuing her curiosity of unprecedented trends in 21st century U.S. cities.

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